

What is claimed is:

1. A method of managing defects on a write-once optical recording medium having at least one recording layer, the method comprising the steps of:

allocating at least one replacement area and a plurality of temporary defect management areas to the optical recording medium, wherein the temporary defect management areas are separately provided; and

recording defect management information on at least one of the plurality of temporary defect management areas.

2. The method of managing of claim 1, wherein in the allocating step, at least one of the plurality of temporary defect management areas is allocated to an inner circumferential area of the optical recording medium and at least one of the plurality of temporary defect management areas is allocated to an outer circumferential area of the optical recording medium.

3. The method of managing of claim 1, wherein in the allocating step, one of the plurality of temporary defect management areas is provided in a lead-in area of the optical recording medium and one of the

4. The method of managing of claim 1, wherein in the allocating step, one of the plurality of temporary defect management areas is provided at a beginning portion of a data area and one of the plurality of temporary defect management areas is provided at an ending portion of said data area of the optical recording medium.

5. The method of managing of claim 1, wherein the step of allocating further comprises:

allocating at least one inner spare area, at least a portion of which is used as a replacement area to replace a defective area;

allocating at least one outer spare area, a portion of which is used as a replacement area to replace a defective area; and

allocating a portion of at least one of the at least one outer spare area and the at least one inner spare area as a temporary defect management area to manage defect management information.

6. The method of managing of claim 5, wherein in the step of allocating, the at least one inner spare area includes a first inner spare area, an entire allocated area of which is used to replace a defective area.

7. The method of managing of claim 5, wherein in the step of allocating, the at least one inner spare area includes a first inner spare area allocated to a beginning portion of a data area, and the at least one

outer spare area includes a first outer spare area allocated to an ending portion of the data area.

8. The method of managing of claim 1, wherein a first one of the temporary defect management areas has a fixed size, whereas a second one of the temporary defect management areas has a variable size.

9. The method of managing of claim 8, wherein in the step of allocating, the first one of the temporary defect management areas is allocated to a lead-in area, and the second one of the temporary defect management areas is allocated to an outer spare area.

10. The method of managing of claim 8, wherein in the step of allocating, the first and second ones of the temporary defect management areas are allocated to an inner spare area and an outer spare area of the optical recording medium respectively.

11. The method of managing of claim 1, wherein in the step of allocating, the optical recording medium has at least two recording layers, a first recording layer which includes a temporary defect management area having a fixed size and a temporary defect management area having a variable size, and a second recording layer which includes a temporary defect management area having a fixed size and at least one temporary defect management area having a variable size.

12. The method of managing of claim 11, wherein the temporary defect management areas having a fixed size are located in a lead-in area of the first and second recording layers, respectively, and the temporary defect management areas having a variable size are located in an outer spare area of the first and second recording layers, respectively.

13. The method of managing of claim 11, wherein the temporary defect management areas having a fixed size are located in an inner spare area of the first and second recording layers, respectively, and the temporary defect management areas having a variable size are located at an outer spare area of the first and second recording layers, respectively.

14. The method of managing of claim 12, wherein in the step of allocating, the first recording layer includes a first inner spare area, an entire area of which is used to replace a defective area and the outer spare area having a variably allocated size, and the second recording layer includes a second inner spare area and the outer spare area.

15. The method of managing of claim 1, wherein the optical recording medium is a write-once Blu-ray disc (BD-WO).

16. The method of managing of claim 1, wherein in the step of recording, said defect management information includes at least one temporary defect list (TDFL) and at least one temporary disc definition structure (TDDS).

17. The method of managing of claim 8, wherein the first and second ones of the temporary defect management areas are used sequentially with respect to one another.

18. The method of managing of claim 8, wherein the first and second ones of the temporary defect management areas are used randomly without priority with respect to one another.

19. The method of managing of claim 16, wherein the at least one temporary defect list and the at least one temporary disc definition structure are separated.

20. The method of managing of claim 16, wherein the at least one temporary defect list and the at least one temporary disc definition structure are integrated.

21. The method of managing of claim 16, wherein information providing notification of which area among the temporary defect management areas is full is indicated by a full flag.

22. The method of managing of claim 16, wherein the size of each of the temporary defect management areas is recorded in the TDDS.

23. An apparatus for managing defects on a write-once optical recording medium having at least one recording layer, the apparatus comprising :

means for allocating at least one replacement area and a plurality of temporary defect management areas to the optical recording medium, wherein the temporary defect management areas are separately provided; and

means for recording defect management information on at least one of the plurality of temporary defect management areas.

24. A write-once optical recording medium comprising:

a data area including at least one replacement area; and

a plurality of temporary defect management areas allocated to the optical recording medium, wherein the temporary defect management areas are separately provided, and defect management information is recorded on at least one of the temporary defect management areas.

25. The optical recording medium of claim 24, wherein at least one of the plurality of temporary defect management areas is allocated to an inner circumferential area of the optical recording medium and at least one of the plurality of temporary defect management areas is allocated to an outer circumferential area of the optical recording medium.

26. The optical recording medium of claim 24, further comprising:

a lead-in area, wherein one of the plurality of temporary defect management areas is provided in the lead-in area of the optical recording medium and one of the plurality of temporary defect management areas is provided at an end portion of the data area of the optical recording medium.

27. The optical recording medium of claim 24, wherein one of the plurality of temporary defect management areas is provided at a beginning portion of the data area and one of the plurality of temporary defect management areas is provided at an ending portion of said data area of the optical recording medium.

28. The optical recording medium of claim 24, further comprising:

at least one inner spare area in the data area, at least a portion of which is used as a replacement area to replace a defective area; and

at least one outer spare area in the data area, a portion of which is used as a replacement area to replace a defective area, wherein a portion of at least one of the at least one outer spare area and the at least one inner spare is used area as a temporary defect management area to manage defect management information.

29. The optical recording medium of claim 28, wherein the at least one inner spare area includes a first inner spare area, an entire allocated area of which is used to replace a defective area.

30. The optical recording medium of claim 28, wherein the at least one inner spare area includes a first inner spare area allocated to a beginning portion of the data area, and the at least one outer spare area includes a first outer spare area allocated to an ending portion of the data area.

31. The optical recording medium of claim 24, wherein a first one of the temporary defect management areas has a fixed size, whereas a second one of the temporary defect management areas has a variable size.

32. The optical recording medium of claim 31, further comprising:

a lead-in area; and

an outer spare area in the data area, wherein the first one of the temporary defect management areas is allocated to the lead-in area, the second one of the temporary defect management areas is allocated to the outer spare area.

33. The optical recording medium of claim 31, further comprising:

a inner spare area and an outer spare area, both in the data area, wherein the first and second ones of the temporary defect management areas are allocated to the inner spare area and the outer spare area of the optical recording medium, respectively.

34. The optical recording medium of claim 24, wherein the optical recording medium has at least two recording layers, a first recording layer which includes a temporary defect management area having a fixed size and a temporary defect management area having a variable size, and a second recording layer which includes a temporary defect management area having a fixed size and at least one temporary defect management area having a variable size.

35. The optical recording medium of claim 34, wherein the temporary defect management areas having a fixed size are located in a lead-in area of the first and second recording layers, respectively, and the temporary defect management areas having a variable size are located in an outer spare area of the first and second recording layers, respectively.

36. The optical recording medium of claim 34, wherein the temporary defect management areas having a fixed size are located in an inner spare area of the first and second recording layers, respectively, and the temporary defect management areas having a variable size are located at an outer spare area of the first and second recording layers, respectively.

37. The optical recording medium of claim 35, wherein the first recording layer includes a first inner spare area, an entire area of which is used to replace a defective area and the outer spare area having a variably allocated size, and the second recording layer includes a second inner spare area and the outer spare area.

38. The optical recording medium of claim 24, wherein the optical recording medium is a write-once Blu-ray disc (BD-WO).

39. The optical recording medium of claim 24, wherein said defect management information includes at least one temporary defect list (TDFL) and at least one temporary disc definition structure (TDDS).

40. The optical recording medium of claim 39, wherein the at least one temporary defect list and the at least one temporary disc definition structure are separated.

41. The optical recording medium of claim 39, wherein the at least one temporary defect list and the at least one temporary disc definition structure are integrated.

42. The optical recording medium of claim 39, wherein the size of each of the temporary defect management areas is recorded in the TDDS.